

**We claim:**

1. A process for preparing alkylaryl compounds by reacting a C<sub>10-14</sub>-monoolefin mixture with an aromatic hydrocarbon in the presence of an alkylation catalyst to form alkyl aromatic compounds and if appropriate subsequently sulfonating and neutralizing the resulting alkylaryl compounds, wherein, in the C<sub>10-14</sub>-monoolefins, on average, more than 0% and up to 100% of methyl branches are present in the longest carbon chain and fewer than 50% of the methyl branches are in the 2-, 3- and 4-position, calculated starting from the chain ends of the longest carbon chain.
- 10 2. A process according to claim 1, wherein, in the C<sub>10-14</sub>-monoolefins, on average, from 10 to 80% of methyl branches are present in the longest hydrocarbon chain.
- 15 3. A process according to claim 1 or 2, wherein fewer than 30% of the methyl branches are in the 2-, 3- and 4-position, calculated starting from the chain ends of the longest hydrocarbon chain.
4. A process according to any of claims 1 to 3, wherein the C<sub>10-14</sub>-monoolefins in each case have a maximum of two methyl branches.
- 20 5. A process according to claim 4, wherein the C<sub>10-14</sub>-monoolefins in each case have a maximum of one methyl branch.
- 25 6. A process according to any of claims 1 to 5, wherein the aromatic hydrocarbon is benzene.
7. A process according to any of claims 1 to 6, wherein the alkylation catalyst is selected from zeolites of the EPI, FER structural types, pentasils having MFI or MEL structure and faujasites.
- 30 8. A process according to any of claims 1 to 7, wherein the alkylation is carried out in the liquid phase at a temperature in the range from 100 to 250°C.
9. An alkylaryl compound obtainable by a process according to any of claims 1 to 8.
- 35 10. The use of alkylarylsulfonates according to claim 9 as surfactants.

11. A laundry detergent or cleaning composition comprising, in addition to customary ingredients, alkylarylsulfonates according to claim 9.